EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Lisa Yociss (Reg. No. 36975) on 12/15/2010.

Information Disclosure Statement

2. The information disclosure statement filed 7/15/2010 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Examiner Amendments

The application has been amended as follows:

1. (Currently amended) A method of logically partitioning a plurality of resources ~~that are included in a single hardware channel adapter that is included in a System Area Network (SAN), wherein said single hardware channel adapter is shared by different partitions, and wherein at least a first one of the plurality of resources is~~

~~assigned to a first partition and at least a second one of the plurality of resources is assigned to a second, different partition~~, comprising:

providing a single hardware channel adapter included in a System Area Network (SAN), said single hardware channel adapter comprising said plurality of resources, wherein said single hardware channel adapter is shared by different partitions, and

wherein at least a first of the plurality of resources is assigned to a first partition and at least a second one of the plurality of resources is assigned to a second, different partition;

storing, by a hypervisor, a first partition identifier that identifies the first partition in a first hardware register that is included within the at least the first one of the plurality of resources, wherein the at least the first one of the plurality of resources is assigned to the first partition; and

enforcing, by the hardware channel adapter, partitioning of the plurality of resources by allowing only third ones of the plurality of resources that have the first partition identifier stored in a hardware register that is included within the third ones of the plurality of resources to access the at least the first one of the plurality of resources,

wherein fourth ones of the plurality of resources that do not have the first partition identifier stored in a hardware register that is included within the fourth ones of the plurality of partitions cannot access the first one of the plurality

of resources, and wherein the fourth ones of the plurality of resources include the at least the second one of the plurality of resources; [[and]]

wherein the hardware channel adapter is included in a node that includes a central processing unit, and wherein the hardware channel adapter couples the central processing unit to a switch;

requesting, by an operating system, a particular one of said plurality of resources of a particular type,

wherein the operating system is assigned to a particular partition;

responsive to the request, selecting, by the hypervisor, a particular one of said plurality of resources that is said particular type;

responsive to the selection, determining a particular one of the partitions to which said operating system is assigned; and

responsive to the determination, storing, by the hypervisor, a particular partition identifier that identifies said particular one of the partitions in a hardware register within said particular one of said plurality of resources.

2. (Previously Presented) The method according to claim 1, further comprising the steps of:

attempting, by a fifth one of the plurality of resources, to access the at least the first one of the plurality of resources;

comparing, by the hardware channel adapter, a second partition identifier that is stored in a second hardware register that is included in the fifth one of the plurality of resources to the first partition identifier;

allowing, by the hardware channel adapter, the fifth one of the plurality of resources to access the at least the first one of the plurality of resources responsive to the second partition identifier matching the first partition identifier; and

ignoring, by the hardware channel adapter, the attempt by the fifth one of the plurality of resources to access the at least the first one of the plurality of resources responsive to the second partition identifier not matching the first partition identifier, wherein the fifth one of the plurality of resources cannot access the at least the first one of the plurality of resources, and wherein the fifth one of the plurality of resources is assigned to the second partition.

3.-7. (Canceled)

8. (Currently Amended) The method according to claim [[7]] 1, further comprising the step of:

permitting only said hypervisor to alter contents of said hardware register.

9. (Canceled)

10. (Previously Presented) The method according to claim 1, further comprising the step of:

enforcing said partitioning using hardware within said hardware channel adapter.

11. (Currently amended) A system of logically partitioning a plurality of resources ~~that are included in a single hardware channel adapter that is included in a System Area Network (SAN), wherein said single hardware channel adapter is shared by different partitions, and wherein at least a first one of the plurality of resources is assigned to a second, different partition~~, comprising:

a single hardware channel adapter included in a System Area Network (SAN), said single hardware channel adapter comprising said plurality of resources,

wherein said single hardware channel adapter is shared by different partitions, and

wherein at least a first of the plurality of resources is assigned to a first partition and at least a second one of the plurality of resources is assigned to a second, different partition;

a hypervisor configured to store ~~storing~~ a first partition identifier that identifies the first partition in a first hardware register that is included within the at least the first one of the plurality of resources, wherein the at least the first one of the plurality of resources is assigned to the first partition; and

wherein the hardware channel adapter is configured to enforce ~~enforcing~~ partitioning of the plurality of resources by allowing only third ones of the plurality of resources

that have the first partition identifier stored in a hardware register that is included within the third ones of the plurality of resources to access the at least the first one of the plurality of resources,

wherein fourth ones of the plurality of resources that do not have the first partition identifier stored in a hardware register that is included within the fourth ones of the plurality of resources cannot access the first one of the plurality of resources, and wherein the fourth ones of the plurality of resources include the at least the second one of the plurality of resources; [[and]]

wherein the hardware channel adapter is included in a node that includes a central processing unit, and wherein the hardware channel adapter couples the central processing unit to a switch; and

an operating system configured to request a particular one of said plurality of resources of a particular type;

wherein the hypervisor is configured to select a particular one of said plurality of resources that is said particular type responsive to the request;

wherein said hardware channel adapter is configured to determine a particular one of the partitions to which said operating system is assigned responsive to the selection; and

wherein said hypervisor is configured to store a particular partition identifier that identifies said particular one of the partitions in a particular hardware register that is included within said particular one of said plurality of resources responsive to

the determination.

12. (Currently amended) The system according to claim 11, further comprising:

a fifth one of the plurality of resources attempting to access the at least the first one of the plurality of resources;

the hardware channel adapter comparing a second partition identifier that is stored in a second hardware register that is included in the fifth one of the plurality of resources to the first partition identifier;

the hardware channel adapter allowing the fifth one of the plurality of resources to access the at least the first one of the plurality of resources responsive to the second partition identifier matching the first partition identifier; and

the hardware channel adapter ignoring the attempt by the fifth one of the plurality of resources to access the at least [[a]] the first one of the plurality of resources responsive to the second partition identifier not matching the first partition identifier, wherein the fifth one of the plurality of resources cannot access the at least [[a]] the first one of the plurality of resources, and wherein the fifth one of the plurality of resources is assigned to the second partition.

13.- 17. (Canceled)

18. (Previously Presented) The system according to claim [[17]] 11, further comprising:

said hardware channel adapter permitting only said hypervisor to alter contents of said hardware register.

19. (Canceled)

20. (Previously Presented) The system according to claim 11, further comprising:

said hardware channel adapter enforcing said partitioning using hardware within said channel adapter.

21. (Currently Amended) The method according to claim 1, wherein the hardware channel adapter is included in a fabric.

22. (Currently Amended) The method according to claim 1, wherein the System Area Network (SAN) is an InfiniBand (IB) network.

23. (Currently Amended) The system according to claim 11, wherein the hardware channel adapter is included in a fabric.

24. (Currently Amended) The system according to claim 11, wherein the System Area Network (SAN) is an InfiniBand (IB) network.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

4. US 2003/0212884 to Lee et al., hereafter referred to Lee discloses a method and system of managing a set of processors, where the processors are assigned to different partitions (Lee: Abstract). However, Lee fails to disclose details concerning the hardware channel adapter, where there is a single hardware channel adapter shared by a plurality of by different partitions that is in a storage area network. Rather, the system of Lee is utilized on a single computing system with multiple processors, and only manages resources of a single computing system (Lee: Figure 1). Meanwhile, the functions of the instant claims are performed over a storage area network (Specification: Figure 1). Further, no other prior art of record fairly teaches or suggests modifying the system of Lee to perform these functions.

5. US 7,010,633, assigned to International Business Machines Corporation (See assignment reel 013966/0483), was commonly owned as of the filing of the instant application. Further, many of the inventors for 7,010,633 listed are also listed for the instant application. Thus, for any portions of the disclosure of US 7,010,633 that were "by another," would not qualify as prior art under 35 USC 103(a), as those portions would qualify as prior art only under 35 USC 102(e), and was commonly assigned at the time the claimed invention was made, as per 35 USC 103(c). Further, the claims of 7,010,633 are considered to be patently distinct from the claims of the instant application.

6. US 7,283,473, assigned to International Business Machines Corporation (See assignment reel 013966/0467), was commonly owned as of the filing of the instant application. Further, many of the inventors for 7,283,473 listed are also listed for the instant application. Thus, for any portions of the disclosure of US 7,283,473 that were "by another," would not qualify as prior art under 35 USC 103(a), as those portions would qualify as prior art only under 35 USC 102(e), and was commonly assigned at the time the claimed invention was made, as per 35 USC 103(c). Further, the claims of 7,283,473 are considered to be patently distinct from the claims of the instant application.

7. US 7,493,409, assigned to International Business Machines Corporation (See assignment reel 013982/0406), was commonly owned as of the filing of the instant application. Further, many of the inventors for 7,493,409 listed are also listed for the instant application. Thus, for any portions of the disclosure of US 7,493,409 that were "by another," would not qualify as prior art under 35 USC 103(a), as those portions would qualify as prior art only under 35 USC 102(e), and was commonly assigned at the time the claimed invention was made, as per 35 USC 103(c). Further, the claims of 7,493,409 are considered to be patently distinct from the claims of the instant application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Christensen whose telephone number is (571)270-1144. The examiner can normally be reached on Monday through Thursday 6:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. C./
Examiner, Art Unit 2444
/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444